

I. STATUS OF CLAIMS

Claims 1-20, 22, and 23 are pending in the above-identified patent application. Claims 1-16, 18-20, 22, and 23 were finally rejected in an Office Action dated April 8, 2008.

Claims 1-16, 18-20, 22, and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kelly (An ECN Probe Based Connection Acceptance Control) paper in view of Jacobs et al. (US 2003/0107994 A1).

Claim 17 stands objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 21 has been cancelled without prejudice.

The Final Rejection of Claims 1-16, 18-20, 22, and 23 is hereby appealed.

II. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds of rejection are to be reviewed on appeal.

Claims 1-16, 18-20, 22, and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kelly (An ECN Probe Based Connection Acceptance Control) paper in view of Jacobs et al. (US 2003/0107994 A1).

III. ARGUMENTS

Appellants respectfully offer the following in reply to the new arguments or arguments presented in a different manner for the first time in the Examiner's Answer to the Appellant's Brief.

(i) The Examiner now asserts that Kelly discloses a method for end-to-end admission control of real-time packet flows in a network comprising "determining, at at least one intermediate network element on the network path, at least one flow rate associated with a plurality of packets," as presently claimed. Appellant respectfully disagrees. In contrast, Kelly merely discloses "sending a series of probe packets from A to B in an attempt to infer the level of congestion." See, e.g., Section 4, paragraph 2, lines 2-4. Accordingly, Kelly appears to be concerned only with sending packets from host A to host B and not determining at least one flow rate "at at least one intermediate network element on the network path," as presently claimed. (Emphasis added). Also, the Examiner relies on routers within a network as taught by Kelly as a disclosure of the claimed intermediate network elements on a network path. However, Appellant respectfully submits that Kelly merely discloses that there are routers within the network. Nowhere

does Kelly disclose, or even suggest, that the router is "at least one intermediate network element on the network path," as presently claimed.

Also, Appellant respectfully submits that Kelly fails to disclose, or even suggest, that routers within a network determine "at least one flow rate associated with a plurality of packets," as presently claimed. Indeed, Kelly merely discloses that the "probe-based connection acceptance control distributes the admission decision between the routers within the network." (Emphasis added). See, e.g., Section 1, column 2, last paragraph, lines 1-3. Therefore, Kelly merely discloses that the probe-based connection acceptance control distributes the control of an admission of additional packets between routers within a network and fails to disclose, or even suggest, that the routers within the network determine "at least one flow rate associated with a plurality of packets," as presently claimed. (Emphasis added). Also, Kelly discloses that a sending end-system is able to infer a level of congestion of a route between the sending end-system and a receiving end-system by sending ECN capable packets to the receiving end-system. (Emphasis added). See, e.g., Section 1, column 2, last paragraph, lines 3-9. Thus, Appellant respectfully submits that Kelly merely discloses determining, at a sending end-system, a level of congestion on a

route between the sending end-system and a receiving end-system, and fails to disclose, or even suggest, "determining, at at least one intermediate network element on the network path, at least one flow rate associated with a plurality of packets," as presently claimed.

In addition, Appellant respectfully submits that Kelly teaches away from a router determining "at least one flow rate associated with a plurality of packets," as presently claimed. In particular, Kelly discloses that probe packets are UDP packets with the ECN capable bit set in the IP header, a sequence number, and contain a timestamp for calculating the RTT (round trip time). See, e.g., Section 4, column 1, paragraph 2, lines 6-8. Appellant respectfully submit that Kelly is directed to calculating the RTT (round trip time) between Host A and Host B in order to infer the level of congestion and the "at least one flow rate associated with a plurality of packets" at the router would be irrelevant. Thus, Appellant respectfully submits that Kelly teaches away from a router determining "at least one flow rate associated with a plurality of packets," as presently claimed.

(ii) Also, the Examiner asserts, and Appellant agrees, that Kelly fails to disclose, or even suggest, "encoding at least two predetermined bits in the at least one probe packet based at

least in part upon a level of congestion associated with the at least one flow rate," as presently claimed. However, the Examiner alleges that Jacobs teaches this claim limitation. Appellant respectfully disagrees. In contrast, Jacobs merely discloses that "bits 7 and 6 of the IP header are used [to] as flags respectively for CE (congestion experience), ECT (ECN capable transport)." See, e.g., paragraph [0026]. Specifically, Jacobs merely discloses that only bit 7 of the IP header is used to flag for CE (congestion experience) and that bit 6 of the IP header is used to flag for ECT (ECN capable transport). Thus, bit 6 of the IP header is used to indicate whether participants in a session are ECN-capable (e.g., act either as receivers which signal back receipt of a notification, or as senders that respond to receipt of a signal from a receiver), and is not encoded based at least in part upon a level of congestion associated with at least one flow rate, as presently claimed. See, e.g., paragraph [0012]. In addition, Jacobs discloses with respect to Figure 5b that "if router A experiences congestion, then, in the data flow directed to the customer terminals, the router sets the CE bit in some randomly chosen RTP data packets from the data stream before forwarding them to the customer terminals." See, e.g., paragraph [0026]. Therefore, as illustrated in Figure 5b of Jacobs, only bit 7

indicates congestion, while bit 6 indicates that sender and receiver are ECN capable transports. Thus, Appellant respectfully submits that Jacobs merely discloses a single bit to indicate congestion along a given path or link in a path and fails to disclose, or even suggest, "encoding at least two predetermined bits in the at least one probe packet based at least in part upon a level of congestion associated with the at least one flow rate," as presently claimed.

Moreover, the Examiner asserts that Jacobs discloses "controlling an admission of additional packets into the network based at least in part on the encoding of the at least two predetermined bits in the at least one probe packet," as presently claimed. Appellant respectfully disagrees. In contrast, Jacobs merely discloses that "at the data source, in response to the congestion notification contained in the said control packet, reducing the loading network resources by [the] said data source." See, e.g., paragraph [0007]. Thus, the data source of Jacobs merely reduces the loading network resources and fails to disclose, or even suggest, "controlling an admission of additional packets," as presently claimed.

(iii) Further, the Examiner asserts, but Appellant disagrees, that one skilled in the art would have been motivated to incorporate the teaching of Jacobs within Kelly so as to

improve and enhance overall network bandwidth efficiency and performance by reducing packet loss and retransmission by maintaining proper congestion levels within a communications network. In particular, Appellant respectfully submits that Jacobs teaches away from Kelly. As stated in MPEP § 2141.02, a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). As confirmed in MPEP § 2145, it is improper to combine references where the references teach away from their combination. In re Grasselli, 713 F.2d 731 (Fed. Cir. 1983). Specifically, Kelly calculates congestion by determining whether a final marking proportion exceeds a threshold level. Also, Kelly discloses that probe packets are user datagram protocol (UDP) packets with the ECN capable bit set in the IP header, a sequence number, and contain a timestamp for calculating the RTT (round trip time). (Emphasis added). See, e.g., Section 4, column 1, second paragraph, lines 6-8. In contrast, Jacobs determines congestion via a bit in the IP header of a data packet. Also, Jacobs discloses that a data sender sets the ECT bit in the IP header in real-time transport protocol (RTP) data packets sent to the customer terminals. (Emphasis added). See,

e.g., paragraph [0026]. One having ordinary skill in the art would not use the bit in the IP header of the real-time transport protocol (RTP) data packet of Jacobs to determine whether the final marking proportion exceeds the threshold level of user datagram protocol (UDP) data packets of Kelly. Accordingly, Appellant respectfully submits that Kelly in view of Jacobs fails to disclose, or even suggest, the present claimed application.

IV. CONCLUSION

Appellant respectfully submits that the pending claims are allowable over the cited references. Accordingly, Appellant respectfully requests that the Board of Patent Appeals and Interferences reverse the pending prior art rejections as set forth in the Examiner's Answer. Also, Appellant respectfully submits that no other fees are required in connection with this request. However, in the event that it is determined that a further fee is necessary to maintain the pendency of this application, the Commissioner is hereby authorized to charge or credit Deposit Account No. 14-1315.

Respectfully submitted,

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